X-Digital Systems XDS PRO4-P QUICK START GUIDE

PLEASE REVIEW THIS GUIDE IN ITS ENTIRETY BEFORE INSTALLING YOUR XDS RECEIVER. ALSO, FOLLOW THESE INSTRUCTIONS BEFORE CALLING SUPPORT.

- Make all satellite RF, data (LAN/WAN) and audio connections prior to applying AC power to the XDS receiver.

Your receiver will NOT receive network programming, until you connect your XDS receiver to the internet and Activate it per the instructions in this document. Your XDS receiver MUST always be connected to the internet 24/7/365.

- XDS urges stations to use an Uninterruptible Power Supply (UPS) for the XDS receiver for equipment protection from power spikes or brownouts. Also consider lightning protection if you are located in an area susceptible to frequent lightning storms. Surge suppressors alone often do not provide sufficient protection.

NOTE: Appendix A contains a front panel menu map that can help you navigate through the XDS receiver settings and configuration.

1. MAKING THE CONNECTIONS

1.1 SATELLITE RF CONNECTION

Your XDS receiver is pre-tuned as specified in the attached "Network Configuration Data Sheet". Once the satellite RF is properly connected and you apply AC power, the XDS receiver should automatically tune and lock to the network satellite carrier.

A. Connect the satellite RF to your downlink

Your new XDS receiver will include a parts kit that includes two 6-foot RG-6 cables and an L-band splitter that allows DC power to pass through one port.

B. Verify the XDS receiver is tuned and locked to the network carrier

Once the satellite RF is properly connected, apply AC power to the receiver and verify as follows:

- If the **SIGNAL** LED is **green** then the receiver is locked to the carrier and the LCD screen will display:

  (Network)
  EB ##.# AG ### (# = numerical value)

  EB should be above 7 and AG should be between about 40 and 60 for proper operation.

- If the XDS receiver does not acquire the network carrier, the **red FAULT** LED will illuminate steadily and the LCD screen will display:

  (Network)
  EB _ _._ AG ### (# = numerical value)

  Verify proper RF connections, LNB power if required, and the XDS receiver should automatically lock to the carrier.

To manually tune the XDS receiver to your network carrier:

- At the main screen with the network logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Tuner**. Press SET.
- Press the left or right arrow keys to reach **Frequency**. Press SET.

  Check Network Data Sheet for Frequency
- Use the four arrow keys and the SET key to set the frequency to the value on the Network Data Sheet packed with your receiver.
- Press the left or right arrow keys to reach **Symbol Rate**. Press SET.

  Check Network Data Sheet for Symbol Rate
- Use the four arrow keys and the SET key to set the symbol rate to the value on the Network Data Sheet packed with your receiver.

The XDS PRO4-P receiver should lock. (**Green SIGNAL** LED will illuminate steadily).

If this XDS receiver is designated to supply DC power to the LNB at your dish, you can turn on the LNB voltage on the XDS receiver front panel menu as follows:

- Make sure your downlink LNB is connected to the XDS receiver
- Apply AC power to the receiver

- From the main screen with the network logo, press the SET key, then press the left or right arrows to reach **Setup**. Press SET.
- Press the left or right arrows to reach **Tuner**. Press SET.
- Press the left or right arrows to reach **LNBV**, Press SET and turn the LNB Voltage on.

If the front panel of your XDS receiver displays flashing ORANGE lights, this indicates all Activation and Installation steps have not been completed and/or your XDS receiver is not connected to the internet. All Activation and Installation steps, including your internet connection, must be completed or you will NOT receive the networks programming. Your XDS receiver must ALWAYS be connected to the internet 24/7/365.

Important note: if multiple C-band satellite receivers are sharing a LNB, it is highly recommended that an external LNB power supply be used. This will prevent interruption of LNB power by any one of the station's satellite receivers rebooting, loosing power, etc.

1.2 INTERNET CONNECTION - REQUIRED

This new XDS receiver requires connection to an always-on internet pathway. The internet pathway is used by the network to troubleshoot remotely, send audio or text content to your receiver's storage, send commercial playback schedules, retrieve as-played logs of commercials inserted by the receiver, and more.

Your XDS receiver will be delivered with a 20-foot Category 5 data patch cord wired "straight through" (<u>not</u> crossover) for connection to your network's hub or switch.

A. Connect the XDS Receiver to your network

If you elect to place your XDS receiver in your local network "inside" your firewall, connect your network cable to one of the receiver's **LAN** ports. The receiver is set by default to obtain a dynamic IP address, also called a "DHCP address", from your network's DHCP server. If there is no DHCP server or you elect to assign a static IP address, you can do it as follows:

Assigning a Static IP address to a <u>LAN</u> Port:

- At the main screen with the network logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Network**. Press SET.

- The default setting for DHCP is ON. Use the SET and arrow keys to change DHCP from ON to OFF.
- Press the left or right arrow keys to go to the LAN Address menu. Press SET.
- Use the up and down arrow keys and the SET key to set the desired IP address.
- Press the left or right arrow keys to go to the LAN Subnet menu. Press SET.
- Use the up and down arrow keys and the SET key to set the desired subnet address.
- Press the left and right arrows to go to the Gateway menu and press SET.
- Use the up and down arrow keys and the SET key to set the desired gateway address.

Assigning a Static IP address to the WAN Port:

If you elect to connect your receiver in a firewall zone called a "DMZ" (demilitarized zone) or '"Outside" the firewall where it can see the internet directly, connect your network cable to the receiver's **WAN** port. You must assign a static IP **WAN Address, WAN Subnet,** and **Gateway.** Follow the "Assigning a Static IP address to a LAN Port" instructions above to go to the appropriate WAN menus and change settings as desired.

NOTE: If your local area network (LAN) requires the use of a proxy server, please refer to the online user's guide located at your affiliate's website. Refer to Section 2 on page 7 of this document for instructions on how to login to you your website.

B. Test connection to the NOC

- At the main screen with the network logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Network**. Press SET.
- Press the left or right arrow keys to **TEST NOC**. Press SET.
- Press the **NOC** softkey to perform the test.

The test will take no more a minute or two. You will get a **SUCCESFULLY CONNECTED TO NOC** message if your IP settings are correct. Otherwise you will get a **CANNOT CONNECT TO NOC** message and you will need to adjust your IP settings (on the receiver, or in your network's switches, routers or firewall) until the receiver can connect to the NOC.

To troubleshoot, you can use the **PING** softkey to verify your receiver can locally connect to your network gateway.

1.3 AUDIO OUTPUT CONNECTIONS

Once the XDS receiver is locked to the carrier you can verify audio functionality as follows:

A. Verify audio reception

From the factory the XDS receiver headphone/speaker output and all the audio ports are programmed to receive the network's **Test Channel**, however the network's receivers may be shipped with current program authorizations active. To check the audio and speaker/headphone outputs for audio you can still use the **Test Channel.**

Connect a set of headphones (or use front panel speaker) and verify you can hear the **Test Channel**.

To manually program the XDS receiver spkr/headphone to output the **Test Channel**:

- At the main screen with the network logo, press the SET key, then the left or right arrows to reach **Audio Ports**. Press SET.
- Press the left or right arrows to reach **Headphones**. Press SET.
- Press the left or right arrows to reach **Program**. Press SET.
- Use the up and down arrows to find the network's **Test Channel.** Press SET.

The Test Channel is intended to check receiver operation. It does NOT prove that you can receive the network's programming. To receive program audio, you must complete all installation and Activation steps, including a fulltime internet connection. Your XDS receiver must ALWAYS be connected to the internet 24/7/365.

B. Verify audio ports

Your new XDS receiver will be delivered with a parts kit including four mating DB-9 connectors with shells.

The analog audio outputs for your services appear at the four DB-9 connectors on the rear panel. Wiring pinouts are the same as on the older Starguide receivers:

AUDIO OUTPUT – DB9M

Pin	Signal	Signal	Pin
1	L+	L-	6
2	GND	GND	7
3	-	-	8
4	GND	R-	9
5	R+		

Rule: Each DB-9 connector carries one radio program stream, either mono or stereo. If the program is mono, the same audio appears on the left and right pin pairs. **In most cases, the left and right sides of a stereo channel are no longer used to carry unrelated mono programs.**

Verify you can hear the test program through all receiver ports.

To manually program the XDS receiver to output the **Test Channel** on a desired audio port:

- At the main screen with the network logo, press the SET key, then the left or right arrows to reach **Audio Ports**. Press SET.
- Press the left or right arrows to select the **Audio Port** (letter A, B, C or D). Press SET.
- Press the left or right arrows to select **Program**. Press SET.
- Use the up and down arrows to find the **Test Channel.** Press SET.

1.4 RELAY CLOSURES

There are two DB-37 connectors on the rear panel which together contain a total of 32 mappable relay (or contact) closures to drive your station automation. Relay closure are momentary Form “A”, rated 500ma @24v.

Your XDS receiver will be delivered with a parts kit including two mating DB-37 connectors with shells.

The pinouts for the DB-37 connectors are:

RELAY A - DB37M

Pin	Signal	Signal	Pin
1	RLY1A	RLY1B	20
2	RLY2A	RLY2B	21
3	RLY3A	RLY3B	22
4	RLY4A	RLY4B	23
5	GND	GND	24
6	RLY5A	RLY5B	25
7	RLY6A	RLY6B	26
8	RLY7A	RLY7B	27
9	RLY8A	RLY8B	28
10	GND	RLY9B	29
11	RLY9A	RLY10B	30
12	RLY10A	RLY11B	31
13	RLY11A	RLY12B	32
14	RLY12A	GND	33
15	**Cue Txd**	RLY13B	34
16	RLY13A	RLY14B	35
17	RLY14A	RLY15B	36
18	RLY15A	RLY16B	37
19	RLY16A		

RELAY B - DB37M

Pin	Signal	Signal	Pin
1	RLY1A	RLY1B	20
2	RLY2A	RLY2B	21
3	RLY3A	RLY3B	22
4	RLY4A	RLY4B	23
5	GND	GND	24
6	RLY5A	RLY5B	25
7	RLY6A	RLY6B	26
8	RLY7A	RLY7B	27
9	RLY8A	RLY8B	28
10	GND	RLY9B	29
11	RLY9A	RLY10B	30
12	RLY10A	RLY11B	31
13	RLY11A	RLY12B	32
14	RLY12A	GND	33
15	NC	RLY13B	34
16	RLY13A	RLY14B	35
17	RLY14A	RLY15B	36
18	RLY15A	RLY16B	37
19	RLY16A		

If you or your automation vendor has developed a program that can read text cues directly, you may get the cue serial stream from pins 15 and 10 on the **Relay A** port on your XDS receiver (see pinout above). The “Cue TxD” pin is RS-232 data with no flow control or handshaking. Baud rate is set by default to 9600 bps 8N1.

2. VERIFY PROGRAMMING AND ACTIVATE

In the XDS system each program, not each channel, is permissioned and labeled for station use. Therefore, instead of tuning to a channel to find a program, you will schedule the programs to appear on each output port based on the stations that have received authorization(s). You will need to review your schedule and activate your receiver with your station’s programming.

You can edit and activate the schedule of the programs that you want to appear on each audio output port of the XDS receiver through the network’s Affiliate website at the internet URL provided on the Network Configuration Data Sheet packed with your receiver.

To login you will use the XDS **receiver's serial number as the username** and a **password generated by the receiver**. To find this password:

- At the main screen with the network logo, press the SET key, then the left or right arrows to reach **Setup**. Press SET.
- Press the left or right arrows to select **Serial Number**.
- Press the **PWD** softkey to display your password.

Once logged in, you may setup a friendly password to the site and also review and approve your receiver's setup (Time Zone, Schedule, Relay Mappings, etc).

Adjust Time Zone

Setup the appropriate time zone for your receiver

Review Schedule

You will see the default schedule for every station your receiver supports. Please modify and verify your schedule as desired.

RULE: Each call-letter radio station at your site that carries any programming from this XDS receiver must be assigned to an XDS receiver port and each port must be scheduled to output the programs you need. You can also assign multiple stations per port if desired. (Described in the Port Scheduler section).

NOTE: Your new XDS receiver contains digital audio storage which may be used to "tape delay" network programs and schedule them to play later per your Affiliate Agreement. You can schedule the same XDS receiver port to "play back" a mixed schedule of live and delayed programs.

Review Relay Mappings

You will see the default relay mapping configuration for your receiver. Please modify and verify your mappings as desired.

Approve Setup and Activate

Once you reviewed all your desired settings, press the **UPDATE** button, and the NOC will send the updated programming to your receiver.

To verify your receiver is activated, the **UPDATE** LED will turn off and the front panel LCD will display the **"XDS PRO4P"** message instead of the **"Please Activate"** message.

3. SUPPORT CONTACT INFORMATION

If you have any problems please call the network's Technical Services offices specified in the Network Configuration Datasheet and they will help you set up and verify your receiver.

4. FULL MANUAL

This Quick Start Guide is not intended to be a full equipment manual.

To download the XDS User's Guide for your receiver, please browse to the URL on the data sheet packed with your receiver. If this is your first time logging in to your receiver's web site, you'll need to retrieve the password by following the instructions on page 8 of this document, which is part of **Section 2. Verify Programming and Activate**.

Once you have logged in, point to Help, then User's Guide.

The User's Guide may change from time to time, or when software features change.

5. USB DRIVE

The Front Panel USB Drive is not implemented at this time.

Please DO NOT pug in any drives at this time.

6. VU Meters

VU Meters are available on the receiver by selecting:

1) Left Arrow on the Front Panel
2) Key Pad #1 (under VU on the LCD display)

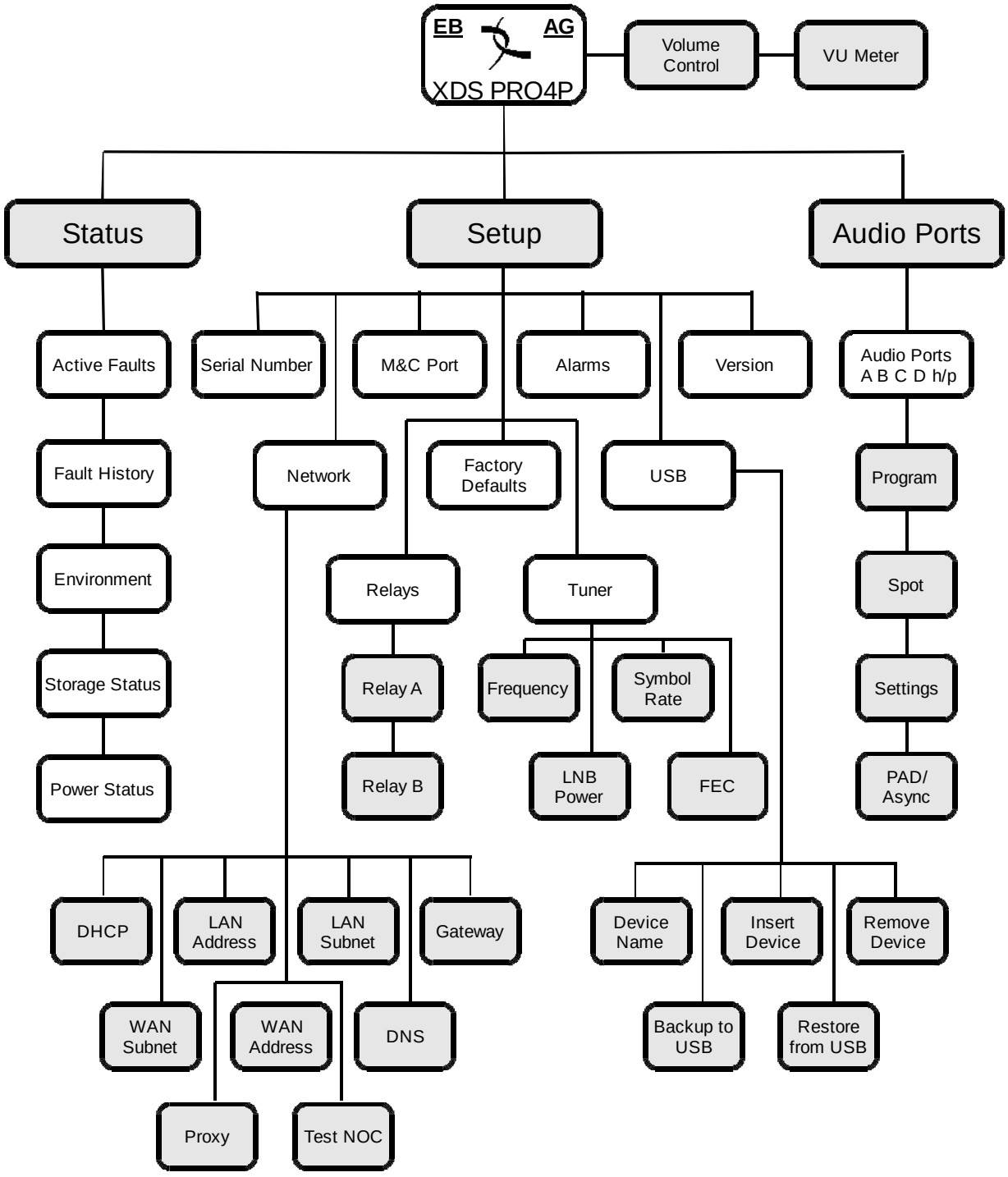
To Exit – Push the UP arrow.

7. Modem Connection

The Modem Connection is not implemented at this time.

Please do not connect a phone line.

APPENDIX A – XDS RECEIVER MENU TREE

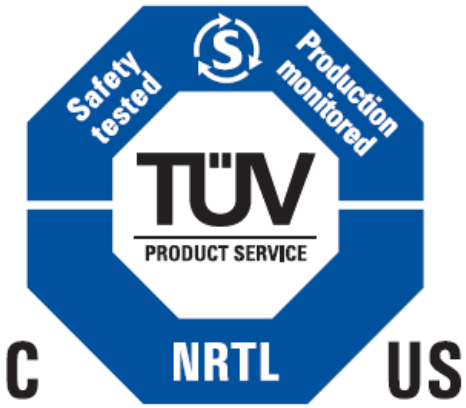


Important Notice

Users Manual
The XDS-PRO4-P DVB Satellite Receiver Users Manual is available on-line. To access the Manual, please log-on to the network's affiliate website with your Affiliate's web page access information, go to Help, and select: Users Manual. If you have any questions, please contact your Affiliate Station, or the Help Desk.

FCC Compliance
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION OF THIS DEVICE IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE; AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

UL and CSA Compliance
THE XDS-PRO4-P DVB SATELLITE RECEIVER WAS TESTED ACCORDING TO UL 60950-1:2003 AND CSA C22.2 NO. 60950-1:2003. THIS DEVICE MEETS THE SAFETY AND TEST REQUIREMENTS OF THE TEST SPECIFICATIONS, AND WAS FOUND TO BE IN COMPLIANCE WITH PROTECTION AIMS OF THE APPLICABLE EC-DIRECTIVES AND THE REQUIREMENTS OF THE STANDARDS. THE XDS-PRO4-P DVB SATELLITE RECEIVER MAY BE MARKED WITH THE TUV MARK AS SHOWN BELOW; CERTIFICATE NO. U8 07 01 62269 001



Warning! Approved external telecom power cross protection must be incorporated into the final installation in accordance with Annex NAC of UL/CSA standard 60950-1. Failure to comply may result in a fire or electric shock hazard and will void regulatory compliance certification.

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Patent Pending
X-Digital Systems, Inc., DVB Satellite Receiver – Patents Pending

Disclaimer
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